United States Patent [19]

Korszun

[54] **DIGITAL DRESSING ROOM**

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[57] **ABSTRACT**

A system of software programs and a database of digital images, including garment images and a basic model body image, which allows a client to select and "try on"—individually or by mixing and matching—the different garment images of the database. The system renders an image of the client's body in the garments, with the client's specific curves, bulges and height which reflect the client's body measurements. Broadly, the system is comprised of two parts: a preprocess and an online process. The preprocess prepares the images for inclusion in the database and addresses the following issues: photographing and digitizing the images, deriving stencils of the images, correcting image mis-alignments, centering the basic model body, detaching the arms/sleeves of the images, classifying garments, and others. The online process, which employs image processing techniques including geometric transformations (such as digital warping), translations, rotations, edge detection, and others, takes as user inputs the client's measurements—bust, waist, hips, and height, for example—and the selected garments; it then layers the garment(s), thus creating an ensemble, transforms the basic model body to reflect the client's height, translates the ensemble unto the body reflecting the client's height, analyzes the amount of garment ease in the ensemble, reshapes the torso of the clad body to show the client's girths, calculates the trigonometric functions used to re-attach untransformed arms/sleeves, and then attaches arms/sleeves unto the reshaped torso. The result is a rendering of a clothing ensemble as it would drape a body with the client's measurements.

34 Claims, 30 Drawing Sheets